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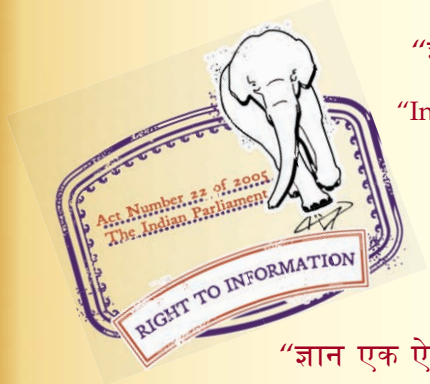

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SPECIFICATION FOR CUPROUS OXIDE WATER DISPERSIBLE POWDER CONCENTRATES

(First Revision)

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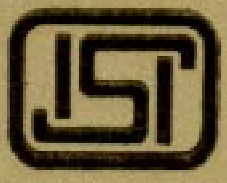

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SPECIFICATION FOR CUPROUS OXIDE WATER DISPERSIBLE POWDER CONCENTRATES

(First Revision)

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(*Continued on page* 7)

Indian Standard

SPECIFICATION FOR CUPROUS OXIDE WATER DISPERSIBLE POWDER CONCENTRATES

(First Revision)

0. FOREWORD

0.1 This Indian Standard (First Revision) was adopted by the Indian Standards Institution on 31 January 1977, after the draft finalized by the Pest Control Sectional Committee had been approved by the Agricultural and Food Products Division Council and the Chemical Division Council.

0.2 This standard was first issued in 1960. This has been revised to align with the statutory requirement regarding packing and tolerances of copper content approved by the registration committee of Central Insecticides Board (CIB). In this revision method for estimation of copper content has been modified.

0.3 Cuprous oxide water dispersible powder concentrates containing varying percentages of cuprous oxide, technical, are largely used as fungicides for the control of plant diseases.

0.4 In the preparation of this standard, due consideration has been given to the provisions of the Insecticides Act, 1968 and the Rules framed thereunder. However, this standard is subject to the restriction imposed under these, wherever applicable.

0.5 For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS : 2-1960*. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

1. SCOPE

1.1 This standard prescribes the requirements and the methods of sampling and test for cuprous oxide water dispersible powder concentrates carrying varying percentages of cuprous oxide, technical.

*Rules for rounding off numerical values (*revised*).

2. REQUIREMENTS

2.1 Description — The material shall be in the form of free flowing powder, devoid of hard lumps and uniform reddish in colour. It shall wet readily on mixing with water providing a suspension suitable for use as a spray.

2.2 Cuprous oxide, technical, employed in the manufacture of cuprous oxide water dispersible powder concentrates shall conform to IS : 1682-1973*.

2.3 The material shall also comply with the requirements given in Table 1.

TABLE 1 REQUIREMENTS FOR CUPROUS OXIDE WATER DISPERSIBLE POWDER CONCENTRATES

Sl No.	Characteristic	Requirement	Method of Test, Ref to	
			Appendix of IS : 1506-1977*	Cl No. of IS : 6940-1973†
(1)	(2)	(3)	(4)	(5)
i)	Copper content, percent by mass	Nominal value as declared on the container (*see* 2.3.1)	A	—
ii)	Suspensibility, percent by mass, *Min* (*see* Note)	80	—	11.2.3.2
iii)	Alkalinity (as Na_2CO_3), percent by mass, *Max*	1·0	B	—

NOTE — The tests shall be carried on untreated sample.

*Specification for copper oxychloride dusting powders (*second revision*).
†Methods of tests for pesticides and their formulations.

2.3.1 *Copper Content* — When determined by the method prescribed in Appendix A of IS : 1506-1977†, the observed copper content, percent (*m/m*), of any of the samples shall not differ from the declared nominal value by more than the tolerance limits indicated below:

Nominal Value, Percent	*Tolerance, Percent*	
Up to 9	+ 10 − 5	of the nominal value
10 and below 50	± 5	
50 and above	+ 5 − 3	

*Specification for cuprous oxide, technical (fungicides grade) (*first revision*).
†Specification for copper oxychloride dusting powders (*second revision*).

2.3.1.1 The actual value of copper content shall be calculated to two decimal places and then rounded off to one decimal place before applying the tolerance as stipulated in **2.3.1.**

3. PACKING AND MARKING

3.1 Packing — The material shall be packed as per the relevant provisions given in IS : 8190 (Part I)-1976*.

3.2 Marking — The following information shall be marked legibly and indelibly on each container in addition to the information as required under the Insecticide Act and Rules:

a) Name of the material,

b) Copper content (*m/m*) percent,

c) Name of the manufacturer,

d) Date of manufacture,

e) Batch number,

f) Net mass of contents, and

g) The minimum cautionary notice worded as under:

'HAZARDOUS. USE RUBBER GLOVES. OVERALLS AND GAUZE MASK TO PREVENT SKIN CONTAMINATION AND INHALATION WHILE HANDLING. ALWAYS STORE IN A SAFE PLACE. DO NOT USE EMPTY CONTAINER FOR STORAGE OF FOODSTUFFS AND ANIMAL FEEDS. IMMEDIATELY AFTER HANDLING WASH HANDS THOROUGHLY WITH SOAP AND WATER.'

3.2.1 The containers may also be marked with the ISI Certification Mark.

NOTE — The use of the ISI Certification Mark is governed by the provisions of the Indian Standards Institution (Certification Marks) Act and the Rules and Regulations made thereunder. The ISI Mark on products covered by an Indian Standard conveys the assurance that they have been produced to comply with the requirements of that standard under a well-defined system of inspection, testing and quality control which is devised and supervised by ISI and operated by the producer. ISI marked products are also continuously checked by ISI for conformity to that standard as a further safeguard. Details of conditions under which a licence for the use of the ISI Certification Mark may be granted to manufacturers or processors, may be obtained from the Indian Standards Institution.

*Requirements for packing of pesticides : Part I Solid pesticides.

4. SAMPLING

4.1 Representative samples of the material shall be drawn as prescribed in 'Indian Standard Methods for sampling of pesticides and their formulations' (*under preparation*).

NOTE — Till such time this standard is published, the samples shall be drawn as agreed to between the parties concerned.

5. TESTS

5.1 Tests shall be carried out by the methods referred in col 4 and 5 of Table 1.

5.2 Quality of Reagents — Unless specified otherwise, pure chemicals and distilled water (*see* IS : 1070-1960*) shall be employed in tests.

NOTE — 'Pure chemicals' shall mean chemicals that do not contain impurities which affect the results of analysis.

*Specification for water, distilled quality (*revised*).

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Base Units

Quantity	*Unit*	*Symbol*
Length	metre	m
Mass	kilogram	kg
Time	second	s
Electric current	ampere	A
Thermodynamic temperature	kelvin	K
Luminous intensity	candela	cd
Amount of substance	mole	mol

Supplementary Units

Quantity	*Unit*	*Symbol*
Plane angle	radian	rad
Solid angle	steradian	sr

Derived Units

Quantity	*Unit*	*Symbol*	*Conversion*
Force	newton	N	1 N = 1 kg.1 m/s^2
Energy	joule	J	1 J = 1 N.m
Power	watt	W	1 W = 1 J/s
Flux	weber	Wb	1 Wb = 1 V.s
Flux density	tesla	T	1 T = 1 Wb/m^2
Frequency	hertz	Hz	1 Hz = 1 c/s (s^{-1})
Electric conductance	siemens	S	1 S = 1 A/V
Pressure, stress	pascal	Pa	1 Pa = 1 N/m^2

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